



President's Council of Advisors on Science and Technology (PCAST)

Science and Technology to Ensure the Safety of the Nation's Drinking Water Workshop

Wednesday, May 18, 2016

**American Geophysical Union, Conference Room A
2000 Florida Avenue, N.W.**

8:30 am Breakfast Available

9:00 am WELCOME AND PARTICIPANT INTRODUCTIONS
Co-chairs: Rosina Bierbaum and Chris Cassel

9:15 am OPENING REMARKS

John Holdren

Assistant to the President for Science and Technology
Director
Office of Science and Technology Policy

9:30 am DRINKING WATER QUALITY – OVERARCHING PERSPECIVES
What is the state of the Nation's drinking water systems? What gaps exist in the ability to provide safe drinking water? What additional resources are needed to address current and future challenges?

Panel & Discussion Moderator: Rosina Bierbaum

Tom Burke

Science Advisor
Environmental Protection Agency

Michael Beach

Associate Director for Healthy Water
Centers for Disease Control and Prevention

Contact on day of meeting: Diana Pankevich at (202) 250-0090 or (202) 295-7732

Nancy Sutley
Chief Sustainability and Economic Development Officer
Los Angeles Department of Water and Power

Steve Via
Director of Federal Relations
American Water Works Association

Open discussion

10:30 am BREAK

10:45 am COMPARING RISKS IN DRINKING WATER

What is the current state of scientific understanding of the risks associated with contaminants in drinking water? Is there sufficient data and research to support the prioritization of contaminants?

Panel & Discussion Moderator: Ed Penhoet

Lynn Goldman
Professor of Environmental and Occupational Health
George Washington University

Joan Rose
Co-Director of the Center for Advancing Microbial Risk
Michigan State University

Gene Phillips
Chief, Bureau of Environmental Health and Radiation Protection
Ohio Department of Health

Bob Perciasepe
President
Center for Climate and Energy Solutions

Open discussion

11:45 am GATHER LUNCH

12:00 pm KEYNOTE:

Upstream and Downstream: Tracing the Causes and Measuring the Effects of Contaminated Water in Flint

Matt Davis
Professor of Public Policy
University of Michigan

12:30 pm WATER SOURCES

What types of insults to water sources lead to contamination? How can these be mitigated? How can science and technology improve monitoring to rapidly detect contaminants? How might water reuse improve drinking water quality?

Panel & Discussion Moderator: Maxine Savitz

Rhodes Trussell – *Challenges*

Chairman and Founder
Trussell Technologies, Inc.

R. Scott Summers – *Science and Technology Opportunities*

Professor of Environmental Engineering
University of Colorado, Boulder

Peter Grevatt – *Science and Technology Opportunities*

Director, Office of Ground Water & Drinking Water
Environmental Protection Agency

Open Discussion – How can the Federal government promote opportunities?

1:15 pm TREATMENT PLANTS

How can science and technology improve monitoring to rapidly detect contaminants? Are there mechanisms by which treating water at the plant can help mitigate potential downstream contaminations in the system?

Panel & Discussion Moderator: Maxine Savitz

Robert Renner – *Challenges*

Chief Executive Officer
Water Resource Foundation

Mark Benjamin – *Science and Technology Opportunities*

Professor Environmental Engineering
University of Washington

Paul Westerhoff – *Science and Technology Opportunities*

Professor, School of Sustainable Engineering and the Built Environment
Arizona State University

Open Discussion – How can the Federal government promote opportunities?

2:00 pm

DISTRIBUTION SYSTEM

How can technology be used to better monitor conditions between the plant and the tap (e.g., residual disinfectant levels, corrosion by-products)? Are there innovative ways to distribute treated water while maintaining treated water quality and preventing future contamination? How can technology be leveraged to repair and/or replace pipes in a cost-effective manner?

Panel & Discussion Moderator: Dan Schrag

Philip Singer – Challenges

Emeritus Professor, Department of Environmental Science and Engineering
University of North Carolina, Chapel Hill

Orren Schneider – Science and Technology Opportunities

Manager, Water Technology, Innovation and Environmental Stewardship
American Water

Cathy Bailey – Science and Technology Opportunities

Director
Greater Cincinnati Water Works

Open Discussion – How can the Federal government promote opportunities?

2:45 pm

BREAK

3:00 pm

PREMISE PLUMBING

What is the state of the science for treating water in the home? How can technology be used to better monitor premise plumbing including at the tap? How can point-of-use devices for water treatment be better incorporated into traditional systems? How can technology be leveraged to repair and/or replace pipes in a cost-effective manner to maintain, or improve, water quality?

Panel & Discussion Moderator: Dan Schrag

Chad Seidel – Challenges

Technical Director, DeRISK Center
University of Colorado, Boulder

Dan Giammar – Science and Technology Opportunities

Walter E. Browne Professor of Environmental Engineering
Washington University in St. Louis

Open Discussion – How can the Federal government promote opportunities?

3:45 pm

SURVEILLANCE OF HUMANS

How can detection of health risks related to contamination of drinking water be more quickly detected? How can surveillance efforts take advantage of new technology or data information to more quickly detect health risks?

Panel & Discussion Moderator: Ed Penhoet

Christopher Weis – *Challenges*

Toxicology Liaison

National Institute of Environmental Health Sciences

Phil Landrigan – *Science and Technology Opportunities*

Dean for Global Health

Icahn School of Medicine at Mount Sinai

Rad Cunningham – *Science and Technology Opportunities*

Epidemiologist

Washington State Department of Health

Open Discussion – How can the Federal government promote opportunities?

4:30 pm

TOWARD A 21ST CENTURY DRINKING-WATER SYSTEM

What topics were not covered that could help in the development of an innovative clean drinking-water system? How can data and technology be leveraged?

Discussion Moderator: Rosina Bierbaum

Peter Gleick

President and Co-founder

Pacific Institute

Chris Kolb

President and Chief Executive Officer

Michigan Environmental Council

Open Discussion

5:15 pm

Wrap-up and Reflections

5:30 pm

Adjourn